REMARKS

Claims 10-23 are all the claims pending in the application. New claims 22 and 23 have been added to further define the invention. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Information Disclosure Statement (IDS)

On January 30, 2001, Applicants filed an IDS including a PTO form-1449 citing two US Patent references, a German reference, and an EPO reference. Although the Examiner initialed next to the US Patent references, he did not acknowledge consideration of the German or EPO reference, despite the fact that he relied upon the German reference to reject some of the claims. Because the IDS was timely filed, Applicants respectfully request that the Examiner return a properly initialed copy of the PTO form-1449 indicating consideration of all the references, including the German and EPO references.

Drawings

The Examiner asserts that Figs. 4-8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. Applicants submit that Figs. 4 and 7-9 are prior art. Accordingly, proposed drawing corrections have been filed herewith, labeling Figs. 4 and 7-9 as --Prior Art--. See the attached proposed drawing corrections, wherein the changes are shown in red ink.

Claim Rejections - 35 U.S.C. § 102

- The Examiner rejected claims 10 and 11 under §102(b) as being anticipated by Japanese 59-85729 to Ishikawa (hereinafter Ishikawa). Applicants respectfully traverse this rejection because Ishikawa fails to anticipate claims 10 and 11 in that he fails to disclose each and every element as set forth in the claims.

Each of claims 10 and 11 is directed to a method for forming a resinous frame, wherein a resinous material is extruded from a die with a nozzle having a certain cross-sectional shape to be formed so as to have a certain cross-sectional shape substantially conforming to the cross-

sectional shape of the nozzle. That is, claims 10 and 11 each sets forth a molding method wherein no mold is used to form the extruded product. Instead, the resinous material is extruded so as to have the cross-sectional shape of the nozzle.

In contrast, Ishikawa discloses a molding method wherein a mold is used to shape the resinous material. For the Examiner's convenience, an English translation of Ishikawa is enclosed herewith. Ishikawa states that it is an object of his invention to sufficiently knead a resin "without causing resin leakage or the inflow of the resin into a mold".[1] Further, Ishikawa does not disclose that the resin is extruded so as to have a cross-sectional shape substantially conforming to that of the nozzle 5. Therefore, Ishikawa fails to disclose a method for forming a resinous frame, wherein a resinous material is extruded from a die with a nozzle having a certain cross-sectional shape to be formed so as to have a certain cross-sectional shape substantially conforming to the cross-sectional shape of the nozzle, as independently set forth in claims 10 and 11.

- The Examiner rejected claims 10-13 under §102(b) as being anticipated by German DE 38 43 342 to Biffar (hereinafter Biffar). Applicants respectfully traverse this rejection because Biffar fails to disclose every element as set forth in Applicants' claims.

Again, each of claims 10 and 11 sets forth a method for forming a resinous frame so as to have a certain cross-sectional shape substantially conforming to the cross-sectional shape of the nozzle; no mold is used.

In contrast to that in each of claims 10 and 11, Biffar discloses a molding method wherein a press mold 7, 8, 28 is used to shape the resinous material. For the Examiner's convenience, an English translation of Biffar is enclosed herewith. Biffar states that according to his invention, it is possible to feed plastic into the mold in a hotter, more liquid state when it can be better and more easily shaped."[2] Biffar also states that it is possible to use different rates of

---

[1] English translation of Ishikawa at page 2, lines 4-6, and page 3, lines 16-20.

[2] English translation of Biffar at page 1, 6th full paragraph.

motion or changes in the cross section of the mouthpiece 25, but notes that such changes are advantageous "to discharge defined accumulations of material, which are advantageous with respect to a desired pressed shape."[3] Throughout the specification, Biffar makes reference to the mold and the pressing of the plastic mass to form the desired shape.[4] Although Biffar states that defined discharge shapes can be obtained by adjusting the cross-section of mouthpiece 25, he makes no mention of forming a frame without a mold.[5] That is, as noted earlier, such a change is cross-sectional shape of the mouthpiece is done so as to discharge defined accumulations of material, which is advantageous with respect to a desired pressed shape.[6] Therefore, Biffar fails to disclose a method for forming a resinous frame, wherein a resinous material is extruded from a die with a nozzle having a certain cross-sectional shape to be formed so as to have a certain cross-sectional shape substantially conforming to the cross-sectional shape of the nozzle, as independently set forth in claims 10 and 11.

Claim Rejections - 35 U.S.C. § 103

- The Examiner rejected claims 10-17 under §103(a) as being unpatentable over US Patent 5,807,588 to Todaka et al. (hereinafter Todaka) in view of Biffar or Ichikawa. Applicants respectfully traverse this rejection because the references fail to establish *prima facie* obviousness.

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the

[3] English translation of Biffar at page 1, 7th paragraph, lines 5-8.

[4] English translation of Biffar at: page 2, 6th full paragraph; paragraph bridging pages 2 and 3; page 3, second and third full paragraphs; sentence bridging pages 3 and 4; and the 3rd through 5th full paragraphs on page 4.

[5] English translation of Biffar at page 4, 5th full paragraph, lines 5-7.

[6] English translation of Biffar at page 1, 6th full paragraph, lines 5-8.

proposed modification.[7] Consequently, without suggestion or motivation to combine, *prima facie* obviousness is not established.

In the present case, the Examiner asserts that it would be obvious to modify Todaka to include a metering screw and plunger instead of just a screw extruder.[8] However, such a modification of Todaka would change his principle of operation.

Todaka operates on the principle of changing the speed of the molding machine actuator, i.e., motor 10 which drives screw extruder 15. In other words, Todaka is directed to devices that control a screw rotational speed in such a manner that the discharged amount of an extrusion material is relatively changed.

It is this type of device, wherein control of the extrusion discharge amount is controlled by a change in the screw extruder rotational speed, that the present invention obviates. That is, the present invention allows the screw rotational speed to remain constant, and instead adjusts the amount of extrusion material with a plunger attached to the screw device.

On the other hand, Todaka is directed to an improvement in an apparatus wherein the extrusion discharge amount is adjusted by a change in the screw rotational speed. That is, Todaka discloses that "it can be thought of to change peripheral speed V of workpiece ... and at the same time, control working speed of an extrusion molding machine actuator (e.g., screw rotational speed) in such a manner that the discharged amount of an extrusion material is relatively changed to follow up changes in peripheral speed V."[9] However, Todaka discloses that there is a problem with such systems in that "the delay in control becomes so remarkable that precise cross-sectional shape of moldings cannot be maintained."[10] Thus, an object of

---

[7] *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

[8] Office Action at paragraph bridging pages 4 and 5.

[9] Todaka at col. 2, lines 6-14.

[10] Todaka at col. 2, lines 25-34.

Todaka's invention is to overcome such a problem by reducing the delay in control of the screw rotational speed. Indeed, Todaka achieves this objective by predicting the change in speed of the workpiece, and then adjusting the screw rotational speed in advance of such a speed change.[11]

But the Examiner proposes changing Todaka's screw extruder into a combination of screw extruder and plunger, wherein the plunger discharges the extrusion material. However, in such a system, wherein the plunger discharges the extrusion material, the rotational speed of the screw extruder would not control the amount of extrusion material discharged; indeed, the rotational speed of the screw extruder would be irrelevant, as in the present invention. Thus, such a modification of Todaka impermissibly would change his principle of operation.

For the above reasons, claims 10-17 are not rendered obvious by Todaka in view of Biffar or Ichikawa.

- The Examiner rejected claims 18-21 under §103(a) as being unpatentable over Todaka in view of Ichikawa or Biffar, and further in view of US Patent 5,645,785 to Cornils et al. (hereinafter Cornils). Applicants respectfully traverse this rejection because the references fail to establish *prima facie* obviousness for the following two reasons.

First, as noted above, the Examiner's proposed modification of Todaka would impermissibly change his principle of operation.

Second, even if one of ordinary skill in the art were motivated to combine the references as suggested by the Examiner, any such combination would still not include all the elements as set forth in Applicants' claims.

Claim 18 sets forth a method for preparing a panel with a resinous frame including, *inter alia*, a pressing member, wherein while relatively moving a panel and the pressing member so that the pressing member moves along a peripheral edge of the panel, the extruded and formed resinous material is unified to the peripheral edge by the pressing member.

---

[11] Todaka at col. 4, lines 1-7, 21-24, 27-31, 45-49, and 54-58.

For example, as shown in Fig. 11, one embodiment of the invention includes a resinous frame forming system 50 having a die 56 that produces a resinous material 55 that is subsequently attached to a glass plate 51 by pressing member 59.

The Examiner notes that Todaka in view of Ichikawa or Biffar fails to disclose a pressing member.[12] The Examiner then asserts that Cornils teaches an extrusion head having a sealing ledge that is movable between a retracted position to an engaged position to pressure seal the extruded material in the form of a frame onto the edges of a panel.[13]

However, Cornils' sealing shoe (ledge member) 31 is not a pressing member as set forth in Applicants' claims. Instead, Cornils' sealing shoe 31 merely forms a portion of the molding cavity into which the resinous material is injected. The sealing shoe 31 is pressed against the pane 1 so as to form a good seal, and is retracted therefrom so as to allow entry of the pane 1 into the apparatus.[14].

Thus, contrary to the Examiner's assertion, Cornils does not teach or suggest a pressing member, wherein while relatively moving a panel and the pressing member, the pressing member moves along a peripheral edge of the panel so that the extruded and formed resinous material is unified to the peripheral edge by the pressing member.

Therefore, *arguendo*, even if one of ordinary skill in the art were to combine the references as suggested by the Examiner, any such combination would still not render obvious Applicants' claims.

For any of the above reasons, claims 18-21 are not rendered obvious by Todaka in view of Ichikawa or Biffar, and further in view of Cornils.

---

[12] Office Action at page 5, 2nd full paragraph.

[13] Office Action at page 5, 3rd full paragraph.

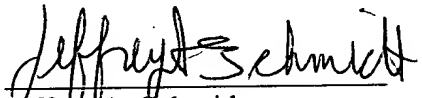
[14] Cornils at: col. 2, lines 14-20; col. 3, lines 22-39; and col. 6, line 62 - col. 7, line 9.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Applicants hereby petition for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



Jeffrey A. Schmidt
Registration No. 41,574

SUGHRUE MION, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037-3213
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

Date: March 11, 2002

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 22 and 23 have been added as new claims.